Section 64 Plastic Pipe

Section 64
Plastic Pipe

4-6401 General

4-6401
General

Plastic pipe is used for culverts and storm drains. Plastic pipe consists of either polyethelene or polyvinyl chloride pipe (PVC).

4-6402 Before Work Begins

4-6402
Before Work Begins

Well before work begins, review the plans and specifications and inspect the sites of all planned installations. Reviewing these items sufficiently in advance helps prevent scheduling conflicts and errors in ordering materials.

During the preliminary review and inspections, the resident engineers and assistant resident engineers should also do the following:

- Identify any unsolved drainage problems.
- Make any plan changes necessary to fit field conditions.
- Determine the locations and lengths of the pipes.
- Once the previous step is accomplished, if necessary, give the contractor a revised pipe list. The list should include any pipes added or altered by a contract change order.
- Verify that Form CEM-3101, “Notice of Materials To Be Used,” which would cover plastic pipe, has been received and properly distributed.

4-6403 During the Course of Work

4-6403
During the Course of Work

During work operations, the resident engineers and assistant resident engineers should do the following:

- Ensure the contractor constructs embankments as specified before any structure excavation.
- Before pipe installation, ensure that excavations and any required bedding are as shown in the *Standard Plans* and meet the specifications.
- After the pipe arrives at the job site, check identification tags or marks to ensure an inspector from the Office of Materials Engineering and Test Services (METS) has inspected the pipe at the source of the pipe’s origin.

- Verify the final acceptability of the pipes following the guidelines in Section 6-2, "Acceptance of Material and Sampling Methods," of the *Construction Manual* (manual). The following problems with pipe are unacceptable:

Type of Pipe	Unacceptable Problems
High density polyethelene	Cracks in ribs or inner wall
Polyvinyl chloride pipe (PVC)	Cracks in wall or cracked or missing ribs

- During the onsite storage of PVC pipes, verify their protection from long-term exposure to sunlight. Without such protection, the pipes may become brittle. In fact, ensure that pipes are protected from any kind of damage throughout all operations.
- Verify that pipes of the specified size, type, and class are in the proper locations.
- Examine gaskets for cracks or splits.
- Verify pipe joints are installed as specified.
- Require methods of handling that will not damage the pipes.
- Ensure that backfill work complies with the details on the contract plans, *Standard Plans*, or both. Refer to Section 4-19, "Earthwork," of this manual for additional instructions on excavation and backfill.
- After the backfill of pressure pipes or siphons to 0.6 m over the crown, witness the specified hydrostatic tests. Require the repair of all obvious leaks and leak reductions to the maximum permitted.
- Require that culvert construction loads (as shown in the *Standard Plans*) meet the minimum fill conditions.
- Continue to periodically inspect pipes as work progresses. A critical time to inspect is after the completion of the grading and before the start of base and surfacing. During the final phases of the project, make another inspection, primarily to find any pipes that need cleaning.

4-6404 Measurement and Payment

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See Section 4-65, "Reinforced Concrete Pipe," of this manual for a discussion on measuring pipe.